We Claim:

1. A method, comprising:

applying photo-thermal energy to a layer of first material disposed on a layer of second material to diffuse a portion of the first material into the second material.

2. The method of claim 1, wherein:

the photo-thermal energy is provided by one of a YAG laser, a CO_2 laser, and an infrared laser.

3. The method of claim 1 wherein:

the second material includes metal; and

the photo-thermal energy penetrates at least into the first layer such that the diffusing forms an electrically conductive trace.

4. The method of claim 3, wherein:

the first material includes tin, the second material includes copper, and the metal trace includes a copper tin alloy.

5. The method of claim 3, wherein:

the photo-thermal energy includes a laser beam having a width between about 2 mils and about 8 mils.

6. The method of claim 3, further comprising:

removing non-diffused portions of the first layer; and

removing non-diffused portions of the second layer.

7. The method of claim 6, wherein:

the diffusing forms a metal trace that is between about 20 % and about 30% larger prior to said removing the non-diffused portions of the first and second layers.

8. The method of claim 6, wherein:

the substrate is a package substrate having a core with an initial via therethrough, the core to support the metal trace, the method further comprising

filling the via with a polymer;

forming a new via through the polymer leaving the new via lined with the polymer; and

depositing interconnect material in the new via.

9. The method of claim 8, further comprising:

depositing inter-layer dielectric material to isolate the metal trace and form a metal trace layer.

10. The method of claim 9, further comprising:

planarizing the metal trace layer to ensure that a surface of the metal trace is exposed; and

electronically coupling the surface to a die to the package substrate to form a semiconductor package.

11. A method comprising:

forming a metal layer on a core;

placing a diffusion layer on the metal layer; and

applying photo-thermal energy to the diffusion layer to diffuse a portion of the diffusion layer into the metal layer.

12. The method of claim 11, wherein:

the diffusion layer includes a conversion coating material to protect the metal layer from oxidation.

13. The method of claim 11, further comprising:

removing undiffused portions of the diffusion layer.

14. The method of claim 13, wherein:

said removing includes removing with chemical mechanical processing.

15. The method of claim 11, further comprising:

removing undiffused portions of the metal layer.

16. The method of claim 15, wherein:

said removing includes removing with chemical mechanical processing.

17. An apparatus, comprising:

an electrically conductive trace on a substrate, the electrically conductive trace including first and second materials, the electrically conductive trace formed by

applying photo-thermal energy to a selected area of a first layer of the first material disposed on a second layer of the second material; and

diffusing a portion of the first material into a portion of the second material responsive to said applying.

18. The apparatus of claim 17, wherein:

the substrate is part of one of a semiconductor package, a printed circuit board, and a die.

19. The apparatus of claim 17, wherein:

the second layer includes metal.

20. The apparatus 17, wherein:

the electrically conductive trace includes a copper tin alloy.

21. The apparatus of claim 17, wherein:

the electrically conductive trace is between about 10 microns and about 20 microns in thickness and between about 27 microns and about 35 microns in width.

22. The apparatus of claim 17, further comprising:

an inter-layer dielectric material electrically isolating the electrically conductive trace.

23. The apparatus of claim 17, wherein:

the second material includes copper.

24. The apparatus of claim 17, wherein:

the first material includes tin.

25. The apparatus of claim 17, wherein:

the first material includes an organic material.

26. The apparatus of claim 17, wherein:

the first material includes a conversion coating material.